

REMARKS

The Final Office Action mailed on April 5, 2007 has been carefully considered. Reconsideration and allowance of the subject application, as amended, are respectfully requested. Claims 35-50 are currently amended in this application. As of this amendment, claims 35, 40 and 45 have been amended. Claims 36, 37, 41, 42, 41 and 46-47 have been cancelled. Therefore, claims 35, 38-40, 43-45, and 48-50 are still pending in this application.

35 USC §103 Rejection of the Claims

Claims 35-38, 40-43, 45-48, 50 were rejected under 35 USC § 103(a) as being unpatentable over Kinkade (U.S. Patent No. 6360329) and further in view of Thayer (U.S. Patent No. 5297275). Applicants respectfully traverse this rejection in light of the preceding amendments.

Applicants have incorporated the subject matter of claims 36 and 37 into independent claim 35. Applicants' newly amended claim 35 is provided below for the Examiner's convenience.

35. A method for timing multiple events using a single timer comprising:
providing a clock capable of indicating a current time;
receiving a plurality of time durations each having a respective duration;
determining an expiration time of each time duration based on a respective received time and said respective duration;
determining which expiration time of said time durations is first to occur relative to said current time;
establishing a start time based on the current time when said first to occur expiration time is determined;
determining a time period based on a difference between said start time and said first to occur expiration time minus an amount of time to send an action signal;
providing a said single timer;
timing said time period with said single timer;
transmitting said action signal corresponding to said time duration having said first to occur expiration time when said time period has expired;
receiving an additional time duration having an additional expiration time while said single timer is timing said time period;
determining if said additional expiration time will occur sooner than said first to occur expiration time;
establishing a new start time based on a current time when said additional expiration time is determined to occur sooner than said first to occur expiration time;
determining a new time period based on a time difference between said new start time and said additional expiration time;
timing said new time period with said single timer; and

transmitting an action signal corresponding to said additional time duration.
(Emphasis Added).

Thus, Applicants' newly amended claim 35 includes the timing of multiple events using a single timer. As discussed in the subject application, “[I]n existing computer-based systems, a timer is required for each type of event to be timed. Using many timers can tie up valuable computing time.” Subject application, para. [0001]. Thus, the present application entitled “Timing Multiple Events with a Single Timer” is designed to address problems such as these. Further support for these amendments may be found, for example, in paragraph [0008] and throughout the subject application.

In contrast, Applicants respectfully submit that neither Kinkade nor Thayer seem to address this problem. Kinkade generally discloses a system for timing intervals in a computer. However, as discussed in Kinkade, “[t]he timing service supports a potentially large number of interval timers by using “timing wheels” that “turn” at different periods.” Kinkade, Abstract. Further, Kinkade describes the use of the timing wheels in the following manner: “The timing facility of the invention provides interval-timing services by the use of two or more “timing wheels” forming a hierarchy of timing wheels, with each timing wheel containing at least two “slots.” Kinkade, lines 39-42. Applicants are unable to find reference to a method for timing multiple events using a single timer as claimed in Applicants' newly amended independent claim 35.

Similarly, Thayer does not appear to teach or suggest a method for timing multiple events using a single timer, as required by amended claim 35. In contrast, Thayer appears to disclose a personal computer system using variable resolution timers. See generally, Thayer, Title. More specifically, Thayer discloses implementing software timers using a periodically interrupting timing device. For example, “This is achieved by dynamically reprogramming the frequency of the interrupting device to be at a selected low rate necessary to provide the resolution requested by the next, impending timer to expire.” Thayer, Abstract. This is shown in greater detail in Figure 5 of Thayer, which clearly depicts the interrelationship between multiple timers. See, Figure 5, reference numerals 202 and 203. Applicants are unable to find reference to a “method for timing multiple events using a single timer” in Thayer. In fact, the combination of Thayer with Kinkade teaches away from newly amended independent claim 35 as well as the underlying

purpose of Applicants' disclosure. That is, as the title of the subject application clearly states, "[t]iming multiple events with a single timer."

Thus, in light of the preceding amendments and remarks, Applicants respectfully submit that the rejection of claim 35 under 35 USC 103 be withdrawn. Independent claims 40 and 45 have been amended to include similar limitations. Therefore, Applicants respectfully submit that these claims are in condition for allowance as well.

Since claims 38-39, 43-44, and 48-50 depend, either directly or indirectly upon Applicants' newly amended independent claims 35, 40 and 45, Applicants respectfully submit that these claims are also in condition for allowance.

Having dealt with the Examiner's objections, Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (603-668-6560) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-2121.

Respectfully submitted,

RONALD D. OLSON ET AL.

By their Representatives,

Customer Number: 45459

Telephone Number: 603-668-6560

By /Edmund P. Pfleger/
Edmund P. Pfleger
Reg. No. 41,252